Executive Summary of Report of Technical Seminar Feedback and Follow-On Analyses
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<u>**Primary Outcome:**</u> An individual's report of a disinclination to use the Internet or email as a basis for the non-adoption of household level (or wireless) broadband is likely due to an aging-out effect. As such, it is likely to be intractable and for that reason, broadband proliferation resources would be better directed toward expanding training and skill programs, as well as subsidies for poverty-driven non-adopters.

<u>**Background:**</u> Consistent with the Rutgers-AppComSci Scope of Work under the Broadband Technology Opportunities Program (Year Three, Project One, Activity Three) on Wednesday, October 10, 2012 at the Edward J. Bloustein School for Planning and Public Policy, Principal Investigator Marc Weiner presented to a technical and academic audience the theoretical background and empirical findings of the household level analyses for the purposes of dissemination, feedback, discussion, and to stimulate further analysis of barriers to household level (and now, wireless) broadband adoption. The presentation was attended by economists, planning and development experts, graduate students in planning and policy, undergraduate students in planning, policy, and communications, and members of the general community.

A comprehensive presentation was made in four parts: (1) Theoretical Considerations of the Digital Divide in the Context of Poverty; (2) Integration of the Multi-Level Analyses; (3) Empirical Findings of the Household-Level Research; and (4) Implications of the Findings for Broadband Proliferation, and the Changing Landscape of Broadband Adoption. The discussion that followed focused, in large part, on the typology of broadband non-adopters. By way of review, and following prior theoretical developments in the field, Rutgers empirical analyses determined four categorical bases for broadband nonadoption: (A) lack of inclination; (B) lack of resources; (C) lack of training or skill; and (D) fear of technology.

The "fear of technology" group (N=53) is so small and idiosyncratic that it attracts no worthy analytical attention. The "lack of training or skill group" was thoroughly analyzed, producing a peer-reviewed publication[1]; the "lack of resources" group was similarly thoroughly analyzed, producing a second peer-reviewed publication.[2] Interest among the discussants, then, focused on the "lack of inclination group," which impelled further analyses of that group. When weighted, the lack of inclination group constitutes 41.2% of the household-level broadband nonadoption population in New Jersey. In unweighted values, 454 of the 1,241 non-adopters sampled (36.6%) indicated lack of inclination as the basis for the non-adoption, the largest of the four nonadoptive categories.

<u>**Analyses and Findings:**</u> The purpose of the follow-on analysis of this group was to determine whether the lack of inclination was stable and fixed, or remediable, through training, incentivization, or otherwise.

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[1] Weiner, M. D., Puniello, O. T., Noland, R. B., Ciemnecki, D. & Turakhia, C. (2012). *Consider the Non-Adopter: Developing a Predication Model for the Adoption of Household-Level Broadband Access*. <u>Socio-Economic Planning Sciences: The International Journal of Public Sector Decision-Making</u>, 46(3), pp. 183-193.
[2] Weiner, M. D. & Puniello, O. T. (under "revise & resubmit" for 2013 publication), *Modeling Digital Exclusion: Statewide Evidence from the Broadband Technology Opportunity Program*. <u>Journal of Poverty: Innovations on Social, Political & Economic Inequalities</u>.

A series of bivariate association analyses were conducted on both experiential and demographic characteristics of the no-inclination group. The first and perhaps most significant finding is that while 68% of the no-inclination group indicated they would need help to go on-line, this finding was _not_ statistically significant (chi2=2.01; p=0.156). This is likely because the question was too hypothetical for their serious consideration. Logically, if they had already opined they were disinclined, a hypothetical probe about needing assistance to do that which one does not want to do anyway is likely to produce large amounts of statistical noise.

More informing than that opinion finding, however, was the factual recall finding of whether the no-inclination group members had ever been exposed to the Internet. Here, we see that 79% had never before used the Internet or email. This finding that was, while not overwhelming (chi2=4.33; p=0.037), sustainable as statistically significant, as well as logical in light of prior published findings on the "lack of skill or training" group, specifically, that exposure to the Internet was the greatest behavioral driver of broadband adoption.

Of the 21% of lack of inclination nonadopters who reported that they _had_ previously used the Internet or email, 89% reported they would _not_ want to start using again; this was an extremely statistically robust finding (chi2=59.12; p=0.000), which suggests negative prior experience, or, more likely (see below), an aging-out effect. Similarly informing was that 82% of the no-inclination group did not use a computer elsewhere such as at work; this was a reasonably stable, statistically significant finding (chi2=8.56; p=0.003).

Demographically, the no-inclination group followed the basic contours of all non-adopters with the exception that neither income nor education were statistically predictive (respectively, chi2=6.28; p=0.393; and chi2=8.89; p=0.351). There was a robust association with "living alone" (chi2=17.33; p=0.000); a weak association with being black (chi2=4.24; p=0.039), which we know reverses under controlled inferential analysis (see footnote one, above), and, fully consistent with prior findings, no association whatsoever with being Hispanic (chi2=0.00; p=0.990).

Age, which for these associational purposes, was measured in five-year increments aggregated to 18 to 39, 40 to 59, and 69 to 85 and over, was highly statistically significant (chi2=44.88; p=0.000). Confirming prior expectations, of the no-inclination group, 75% were 60 and over, 19% were 40 to 59, and 6% were 18 to 39. Most telling is that 46% of the group was over the age of 70, giving credence to the aging-out hypothesis suggested above. This is also in line with the living alone finding, as well as the 79% "not married" finding (chi2=7.39; p=0.007), likely due to the death of the spouse, logically found in higher incidences in older cohorts. Similarly, the 81% "not full time employed" finding (chi2=8.98; p=0.003) is consistent with the statistically significant 82% finding that this group does not use a computer elsewhere. Taken together, these empirical findings support the inference that the primary determinant of membership in the no-inclination group is advanced age.

Conclusion: The actionable finding that flows from this inference is that a report of disinclination to use the Internet or email as a basis for the non-adoption of household level (or wireless) broadband is likely to be intractable. Broadband proliferation resources, then, should not be expended with regard to this group but would be better spent expanding training and skill programs, as well as subsidies for poverty-driven non-adopters.